

EO SUMMARY REPORT
ITEM NO. 6

State of California
Regional Water Quality Control Board
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT
October 12, 2005

ITEM: 6

SUBJECT: NPDES Permit Renewal: Waste Discharge Requirements for the Encina Wastewater Authority, Encina Water Pollution Control Facility and Satellite Wastewater Treatment Plants, Discharge to the Pacific Ocean via the Encina Ocean Outfall, San Diego County (Tentative Order No. R9-2005-0219, NPDES Permit No. CA0107395) (*Victor Vasquez*)

PURPOSE: To adopt updated waste discharge requirements and NPDES permit for the treatment and disposal to the Pacific Ocean of up to 43.3 million gallons per day (MGD) of at least secondary treated effluent from the Encina Wastewater Authority's Encina Water Pollution Control Facility and Vallecitos Municipal Water District's Meadowlark Water Reclamation Plant, and waste brine and at least secondary treated effluent from the Carlsbad Municipal Water District's Carlsbad Water Recycling Facility. This Order would, if adopted, update and replace Order No. 2000-036.

PUBLIC NOTICE: The NPDES permit hearing notice was published in the North County Times newspaper on September 6, 2005 for the Regional Water Board meeting scheduled for October 12, 2005. Copies of the tentative Order were mailed on September 2, 2005 to the Encina Wastewater Authority and to all known interested parties and agencies. Copies were made available for public review at the Regional Water Board office on September 2, 2005. The tentative Order was also posted on the Regional Board's website on September 7, 2005.

DISCUSSION: The Encina Wastewater Authority (EWA, hereinafter also Discharger) is a joint powers authority established to provide regional treatment and disposal of wastewater for a portion of the north coastal area of San Diego County. The following member agencies comprise the EWA: Buena Sanitation District, City of Carlsbad, City of Encinitas, Leucadia Wastewater District, Vallecitos Water District, and the City of Vista.

The Discharger owns and operates the Encina Water Pollution Control Facility (EWPCF), a publicly-owned treatment works (POTW), and the Encina Ocean Outfall (EOO). The EWPCF has secondary treatment facilities to currently treat wastewater up to a dry-weather average monthly capacity of 36 million gallons per day (MGD). The EOO has an average daily flow design capacity of 75 MGD for discharging to the Pacific Ocean. The EWPCF provides the majority of municipal wastewater treatment services to a population of approximately 281,000 within the service areas of the EWA member agencies as well as a portion of the City of Oceanside, treating primarily residential and commercial wastewater. Each EWA member agency owns, operates and maintains its own wastewater collection system which conveys wastewater to the EWPCF.

The Vallecitos Water District independently owns and operates the Meadowlark Water Reclamation Plant (VMWRP), a POTW, and the Meadowlark land outfall which connects to the EOO. The VMWRP has secondary and tertiary treatment facilities to produce up to 2.25 MGD tertiary effluent for water recycling. The Carlsbad Municipal Water District independently owns and operates the Carlsbad Water Recycling Facility (CWRF), a POTW. The CWRF only has tertiary treatment facilities to further treat secondary effluent from the EWPCF to produce tertiary effluent for water recycling purposes. The production, distribution and reuse of recycled water from VMWRP and CWRF are regulated under separate waste discharge requirements. The Buena Sanitation District independently owns the Shadowridge Water Reclamation Plant (BSWRP), a POTW, and land outfall; these facilities are non-operational but maintain a connection to the EOO.

All wastewater generated within the service areas of the EWA member agencies, except for wastewater treated at VMWRP, is treated at EWPCF, and all treated effluent from EWPCF, VMWRP, and CWRF, if not recycled, is discharged to the Pacific Ocean through the EOO. Waste brine generated at the CWRF is also discharged through the EOO. The EWPCF provides all grit and solids treatment and disposal for the EWA.

Expansions at the EWPCF and VMWRP are expected to be completed within the next two years which will bring the potential volume discharged through the EOO up to the dry-weather flow limitation of 43.3 MGD contained in the tentative Order. The EWPCF expansion will increase the secondary

treatment design capacity to 40.5 MGD from 36 MGD and solids treatment design capacity to handle waste solids from 43.3 MGD of wastewater compared to the previous 38 MGD at EWPCF. The VMWRP expansion will increase the design capacity for secondary and tertiary treatment to 5 MGD from 2.25 MGD at VMWRP.

The effluent limitations contained in tentative Order No. R9-2005-0219 for the discharges of treated wastewater effluent and waste brine to the Pacific Ocean are based principally on the 1994 *Water Quality Control Plan for the San Diego Basin* (Basin Plan) and the 2001 *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan). The priority pollutant criteria in tentative Order No. R9-2005-0219 were determined using the Ocean Plan. Minimum secondary treatment requirements for total suspended solids (TSS), carbonaceous biochemical oxygen demand (CBOD), percent removal of TSS and CBOD, and pH are established by USEPA in the Code of Federal Regulations (40 CFR 133.102).

To date, a comment letter on the tentative Order has been received from the Discharger (copy attached) which includes a letter from EWA's legal counsel. The comments are being considered by Regional Water Board staff, and responses to these comments will be prepared and sent to the Regional Water Board members in the second agenda mailing and to the Discharger and other interested parties. If necessary, an errata sheet containing proposed revisions to the tentative Order in response to the comments received and for other reasons will be prepared and sent to the Regional Water Board members in the second agenda mailing and to the Discharger and other interested parties.

SIGNIFICANT CHANGES:

Tentative Order No. R9-2005-0219 consists of a new format and contains updated and new standard language. The following areas in the tentative Order differ from the existing Order:

1. The initial dilution ratio has been recalculated, resulting in a decrease from 200:1 to 144:1.
2. The Shadowridge plant is retained in the Order as a non-discharging satellite facility tributary to the ocean outfall. The treatment plant remains subject to requirements for a) proper operation and maintenance, b) spills and other noncompliance, and c) secondary treatment standards if a

discharge occurs from the plant.

3. Effluent limitations prescribed by Order No. 2000-036 for conventional pollutants (e.g. CBOD5, settleable solids) for the most part, have been retained. Technology-based effluent limitations based on secondary treatment standards are prescribed for the effluent from each wastewater treatment plant that provides secondary treatment rather than the combined final effluent discharged through the outfall. This conforms to the federal guidelines established by USEPA. Separate effluent monitoring points for the Encina and Meadowlark plants have been added.
4. A reasonable potential analysis (RPA) was conducted using data supplied by the Encina Wastewater Authority. Effluent limitations were included for constituents with reasonable potential. Constituents that do not have reasonable potential or had inconclusive RPA results are listed as “performance goals” in this Order. These constituents shall be monitored, but the results will be used for informational purposes only, not compliance determination.
5. Reasonable potential for acute toxicity was not indicated to be present in the discharge; an acute toxicity performance goal is instead included. The monitoring frequency for acute toxicity has been reduced from monthly to semiannually.
6. Reasonable potential for chronic toxicity was not indicated to be present in the discharge; however, a chronic toxicity effluent limitation is retained to protect water quality from potential combined toxicity effects of toxic pollutants. The monitoring frequency for chronic toxicity has been reduced from monthly to quarterly.
7. Section VII – Compliance Determination has been added to explain how compliance with the requirements of the tentative Order will be determined.

COMPLIANCE:

The Discharger has complied with the effluent limitations and requirements of Order No. 2000-036 with some exceptions as follows:

The Discharger was issued an Administrative Assessment of Civil Liability containing a \$6,000 Mandatory Minimum Penalty on December 12, 2003 for two violations of Order No

2000-036: one violation of the TSS “maximum at anytime” concentration effluent limitation in January 2002, and one violation of the TSS “maximum at anytime” concentration effluent limitation in June 2003. These violations were serious violations that required mandatory minimum penalties of \$3,000 each pursuant to Water Code Section 13385(h). Additionally, violations of the TSS “maximum at anytime” concentration effluent limitation occurred in July 2000 and December 2003; these were chronic violations that did not result in a Mandatory Minimum Penalty because there were no other violations during the six-month period following each violation.

On February 20, 2001, 3,000 gallons of digested sludge spilled from EWPCF to adjacent Encinas Creek Flood Channel in Carlsbad, tributary to the Pacific Ocean. The spill occurred when one sludge digester drained into a second digester and an automated pump in the second digester, which would have prevented the digester from overflowing, also failed. Ocean recreational waters adjacent to South Carlsbad State Beach were closed for two days to prevent public contact with waters that were impacted by the spill. EWA reported that it implemented an early detection alarm system to prevent future spills.

KEY ISSUES:

1. The water quality-based performance goals contained in the tentative Order are numerically 25% more stringent than the water-quality-based effluent limitations contained in Order No. 2000-036 due to the lower dilution factor. Additionally, new monitoring requirements require the discharger to select the analytical methods that would best facilitate determination of compliance with the limitations. The effluent discharged through the EOO has historically complied with water-quality based effluent limitations, and it is expected that the discharge will remain in compliance with the new limitations. However, actual compliance for some constituents will not be known until analytical results using the new required analytical methods become available.
2. The requirements of the tentative Order apply to the satellite treatment plants and land outfalls in the same manner that the requirements of Order No. 2000-036 applied to the satellite facilities. EWA has been legally responsible for any NPDES permit non-compliance that occurs from the satellite facilities although EWA is not the owner of the satellite facilities. Currently, EWA may not have the legal authority in place to ensure that the satellite facilities will comply with the requirements of the tentative Order. The Discharger is

currently investigating this issue and the Regional Water Board will consider the Discharger's findings and any proposed changes.

SUPPORTING DOCS:

1. Site Map
2. Tentative Order No. R9-2005-0219 including Attachments A-G with transmittal letters
3. Comment letter from Encina Wastewater Authority

RECOMMENDATION:

Adoption of Tentative Order No. R9-2005-0219, NPDES Permit No. CA0107395, is recommended.